



**User Manual**

**Wireless Range Extender**

---

# Preface

D-Link reserves the right to revise this publication and to make changes in the content hereof without obligation to notify any person or organization of such revisions or changes.

## Manual Revisions

| Revision | Date            | Description                       |
|----------|-----------------|-----------------------------------|
| 1.0      | August 23, 2012 | • Initial release for Revision A1 |

## Trademarks

D-Link and the D-Link logo are trademarks or registered trademarks of D-Link Corporation or its subsidiaries in the United States or other countries. All other company or product names mentioned herein are trademarks or registered trademarks of their respective companies.

Copyright © 2012 by D-Link Systems, Inc.

All rights reserved. This publication may not be reproduced, in whole or in part, without prior expressed written permission from D-Link Systems, Inc.

# Table of Contents

|  |          |   |           |
|--|----------|---|-----------|
| <b>Preface</b> .....                       | <b>i</b> | Status .....  | 26        |
| Manual Revisions .....                     | i        | Device Info .....   | 26        |
| Trademarks .....                           | i        | Logs .....  | 27        |
| <b>Product Overview</b> .....              | <b>1</b> | Statistics .....  | 28        |
| Package Contents .....                     | 1        | IPv6 .....  | 29        |
| System Requirements .....                  | 2        | <b>Connect a Wireless Client to your Router</b> .....                       | <b>30</b> |
| Wireless Installation Considerations ..... | 3        | WPS Button .....  | 30        |
| Introduction .....                         | 4        | Windows® 7 .....  | 32        |
| Features .....                             | 5        | WPA/WPA2 .....  | 32        |
| LED .....                                  | 6        | Note: You can find the SSID and password on the<br>configuration card. .... | 33        |
| <b>Installation</b> .....                  | <b>7</b> | Windows Vista® .....  | 35        |
| Quick Setup Wizard .....                   | 13       | WPA/WPA2 .....  | 36        |
| Setup .....                                | 16       | WPS/WCN 2.0 .....   | 38        |
| Wi-Fi Setup .....                          | 16       | Windows® XP .....   | 39        |
| Extended Wi-Fi Setup .....                 | 18       | WPA/WPA2 .....  | 40        |
| Wireless Security .....                    | 19       | <b>Troubleshooting</b> .....  | <b>42</b> |
| What is WEP? .....                         | 19       | <b>Wireless Basics</b> .....  | <b>44</b> |
| Configure WEP .....                        | 20       | What is Wireless? .....   | 45        |
| Configure WPA/WPA2 Personal .....          | 21       | Tips .....  | 47        |
| Maintenance .....                          | 22       | <b>Networking Basics</b> .....  | <b>48</b> |
| Admin .....                                | 22       | Statically Assign an IP address .....                                       | 49        |
| System .....                               | 23       |   |           |
| Language Pack .....                        | 24       |   |           |
| Firmware .....                             | 24       |   |           |
| Time .....                                 | 25       |   |           |

**Technical Specifications ..... 50**

**Contacting Technical Support ..... 51**

**Warranty..... 52**

**Registration ..... 59**

# Package Contents



DAP-1320 Wireless Range Extender



Wi-Fi Configuration Card



Quick Install Guide

If any of the above items are missing, please contact your reseller.

# System Requirements

|   |  |
|---|--|
| <b>Network Requirements</b>                         | <ul style="list-style-type: none"><li>• IEEE 802.11n or 802.11g wireless clients</li><li>• IEEE 802.11n or 802.11g wireless router or access point</li></ul>   |
| <b>Web-based Configuration Utility Requirements</b> | <p><b>Computer with the following:</b></p> <ul style="list-style-type: none"><li>• Windows®, Macintosh, or Linux-based operating system</li></ul> <p><b>Browser Requirements:</b></p> <ul style="list-style-type: none"><li>• Internet Explorer 6 or higher</li><li>• Safari 4 or higher</li><li>• Mozilla Firefox</li><li>• Google Chrome</li></ul> <p><b>Windows® Users:</b> Make sure you have the latest version of Java installed. Visit <a href="http://www.java.com">www.java.com</a> to download the latest version.</p> |

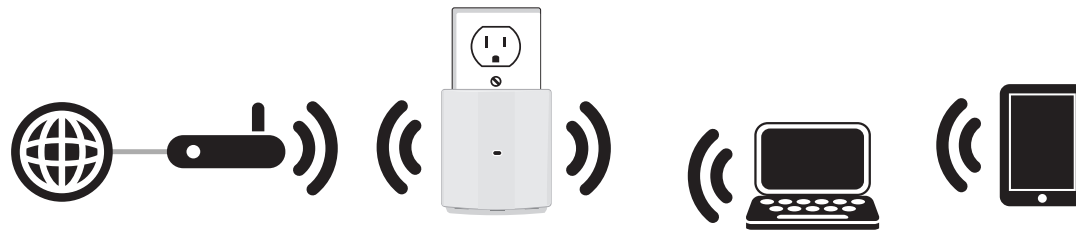
# Wireless Installation Considerations

The D-Link wireless device lets you access your network using a wireless connection from virtually anywhere within the operating range of your wireless network. Keep in mind, however, that the number, thickness and location of walls, ceilings, or other objects that the wireless signals must pass through, may limit the range. Typical ranges vary depending on the types of materials and background RF (radio frequency) noise in your home or business. The key to maximizing wireless range is to follow these basic guidelines:

1. Keep the number of walls and ceilings between the D-Link device and other network devices to a minimum - each wall or ceiling can reduce your adapter's range from 3-90 feet (1-30 meters.) Position your devices so that the number of walls or ceilings is minimized.
2. Be aware of the direct line between network devices. A wall that is 1.5 feet thick (.5 meters), at a 45-degree angle appears to be almost 3 feet (1 meter) thick. At a 2-degree angle it looks over 42 feet (14 meters) thick! Position devices so that the signal will travel straight through a wall or ceiling (instead of at an angle) for better reception.
3. Building Materials make a difference. A solid metal door or aluminum studs may have a negative effect on range. Try to position access points, wireless routers, and computers so that the signal passes through drywall or open doorways. Materials and objects such as glass, steel, metal, walls with insulation, water (fish tanks), mirrors, file cabinets, brick, and concrete will degrade your wireless signal.
4. Keep your product away (at least 3-6 feet or 1-2 meters) from electrical devices or appliances that generate RF noise.
5. If you are using 2.4GHz cordless phones or X-10 (wireless products such as ceiling fans, lights, and home security systems), your wireless connection may degrade dramatically or drop completely. Make sure your 2.4GHz phone base is as far away from your wireless devices as possible. The base transmits a signal even if the phone is not in use.

# Introduction

The Wireless Range Extender (DAP-1320) enables you to extend your existing wireless network coverage by placing the Wireless Range Extender in between your router and the wireless client devices. This is great for extending wireless coverage to basements, home offices or bedrooms that might be distant from your wireless router. The DAP-1320 increases the range of your wireless network by extending the wireless coverage of an existing wireless network.



**Note:** Place the DAP-1320 within equal distance of your existing network/router and wireless clients.



# Features

- **Faster Wireless Networking** - The DAP-1320 provides up to 300Mbps\* wireless connection with other 802.11n wireless clients. This capability allows users to participate in real-time activities online, such as video streaming, online gaming, and real-time audio.
- **Extend Internet access for wireless devices** - Allows you to extend your internet access throughout your home with devices such as laptops, Smartphones, tablets and more.
- **IEEE 802.11n and 802.11g Compliant** - The DAP-1320 is still fully compatible with the IEEE 802.11g standards, so it can connect with existing 802.11g, USB, and Cardbus adapters.
- **User-friendly Setup Wizard** - Through its easy-to-use Web-based user interface, the DAP-1320 lets you control what information is accessible to those on the wireless network, whether from the Internet or from your company's server. Configure your router to your specific settings within minutes.

\* Maximum wireless signal rate derived from IEEE Standard 802.11g and 802.11n specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental conditions will adversely affect wireless signal range.

# Hardware Overview

## LED

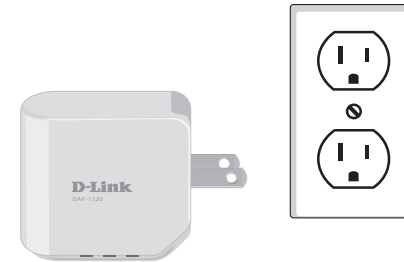


| LED Indicator | Color | Status         | Description   |
|---------------|-------|----------------|---|
| Power/Status  | Green | Solid Green    | The device is connected within the existing network/Router. |
|               |       | Blinking Green | The device is processing a connection                       |
|               |       | Light off      | The device is off   |
|               | Amber | Solid Amber    | During Power ON & while the device is warming up            |
|               |       | Light off      | The device is powered off                                   |

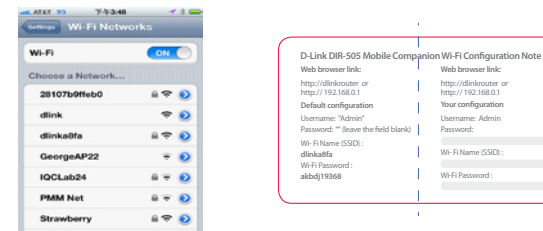
# Installation

Please configure the DAP-1320 with a computer wireless to the AP using the configuration card information connected. The next few pages will further explain.

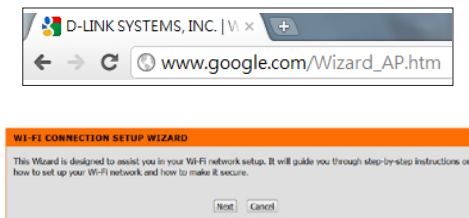
1. Plug the DAP-1320 into a wall outlet and verify that the power LED has turned red to a blinking green.



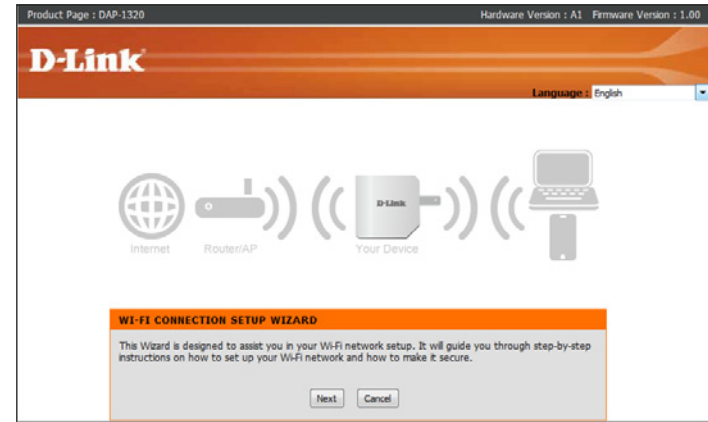
2. From your laptop or mobile device go to your Wireless Utility to display the available wireless networks and select the network that is displayed on your companion card (ex: **dlink-a8fa**). Then, enter the Wi-Fi password included in your card (**akbdj1936**).



3. Open a web browser and type **http://dlinkap.local**. First time users will automatically be directed to the pre-wizard. Please follow the on-screen instructions to complete the manual setup.  
If this is your second time type **http://dlinkap** in the address bar.

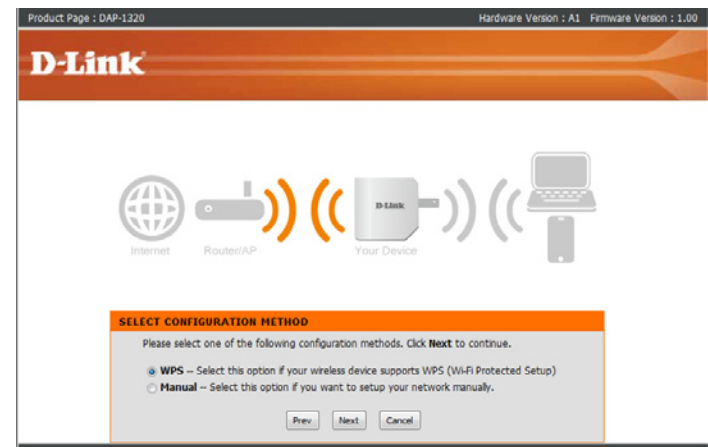


To start the Setup Wizard click **Next**.

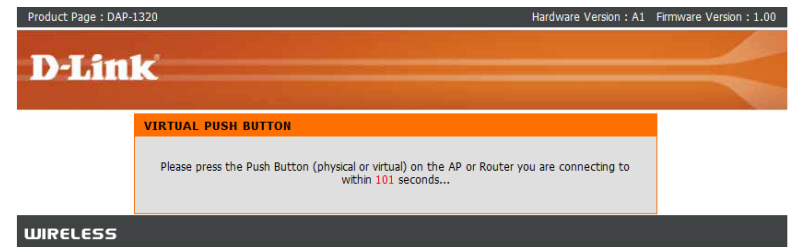


Select **WPS** as the configuration method only if your wireless device supports Wi-Fi Protected Setup (WPS). For **Manual** setup, skip to page 10.

Click **Next** to continue.

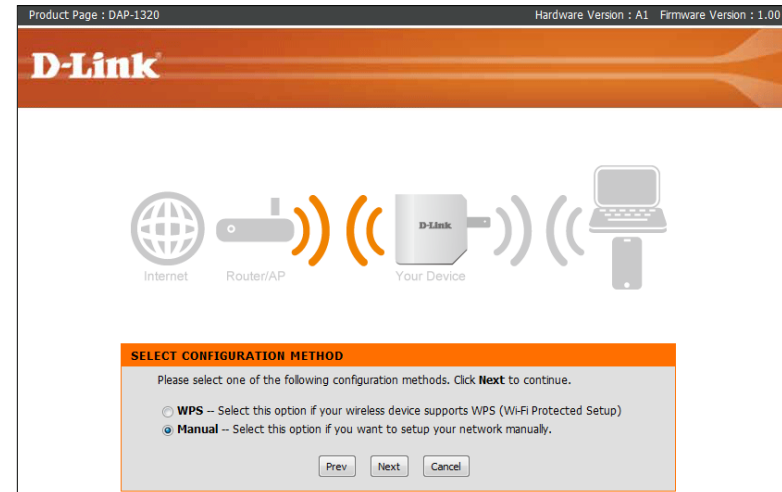


Press down the **Push Button** on the Wireless device you are adding to your wireless network.

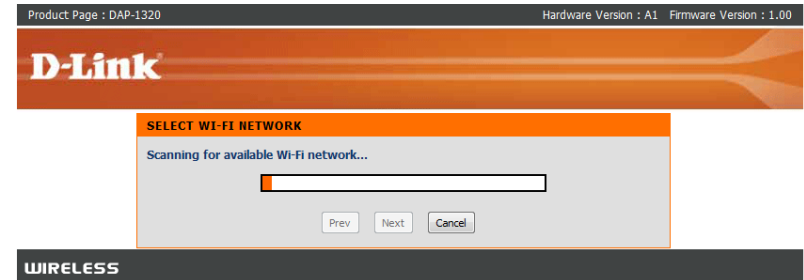


Select **Manual** as the configuration method to set up your network manually.

Click **Next** to continue.



Please wait while your device scans for available Wi-Fi networks.



Select the network you would like your device to connect to and click **Connect** to continue.

| SELECT WI-FI NETWORK |                      |                     |         |           |                       |
|----------------------|----------------------|---------------------|---------|-----------|-----------------------|
| ID                   | Wi-Fi Network Name   | Wi-Fi Security Mode | Channel | Signal(%) | Select                |
| 1                    | Apple Network c3af3a | NONE                | 9       | 100       | <input type="radio"/> |
| 3                    | 00265a493e1e         | WPA2-PSK            | 11      | 100       | <input type="radio"/> |
| 4                    | vanilla              | WEP                 | 11      | 100       | <input type="radio"/> |
| 5                    | fc75164f5aa9         | WPA2-PSK(auto)      | 1       | 100       | <input type="radio"/> |
| 6                    | vanilla              | WEP                 | 11      | 100       | <input type="radio"/> |
| 7                    | m-lounge             | WPA/WPA2-PSK        | 11      | 100       | <input type="radio"/> |
| 9                    | AhhhRealMonsters     | WPA-PSK(auto)       | 11      | 100       | <input type="radio"/> |
| 10                   | dlink_DIR-506L       | WPA-PSK(auto)       | 11      | 100       | <input type="radio"/> |
| 11                   | vanilla              | WEP                 | 6       | 100       | <input type="radio"/> |
| 13                   | fc75164f5bc9         | WPA2-PSK(auto)      | 11      | 100       | <input type="radio"/> |
| 14                   | vanilla              | WEP                 | 11      | 100       | <input type="radio"/> |
| 15                   | telus045             | WPA-PSK             | 1       | 100       | <input type="radio"/> |
| 18                   | dlink                | NONE                | 8       | 70        | <input type="radio"/> |

Enter the existing Wi-Fi Password for the router you are using to connect and click **Next**.

**ENTER WI-FI PASSWORD**

Please enter Wi-Fi Password to establish wireless connection

Wi-Fi Password:

You can choose to change the SSID and the password for the DAP-1320 or you can enter the information found in your configuration card. Click **Next** to continue and finish the setup process.

**PLEASE ENTER THE SETTINGS FOR THE EXTENDED NETWORK**

Give your Extended Wi-Fi network a name.

Extended Wi-Fi Network Name (SSID):  
 (Using up to 32 characters)

Give your Extended Wi-Fi network a password.

Wi-Fi Password :  
 (Between 8 and 63 characters)

Use the same Wi-Fi Network Name for the Extended Network.

The setup is now complete. Please keep Save to finish.

**SETUP COMPLETE**

Please take a note of following summary of your Wi-Fi Security settings for future reference.

Wi-Fi Network Name(SSID) : vanilla  
Wi-Fi Password : dlink

Extended Wi-Fi Network  
Name(SSID) : dlink-79B4  
Wi-Fi Password : 79b41234

Please wait while the system reboots.

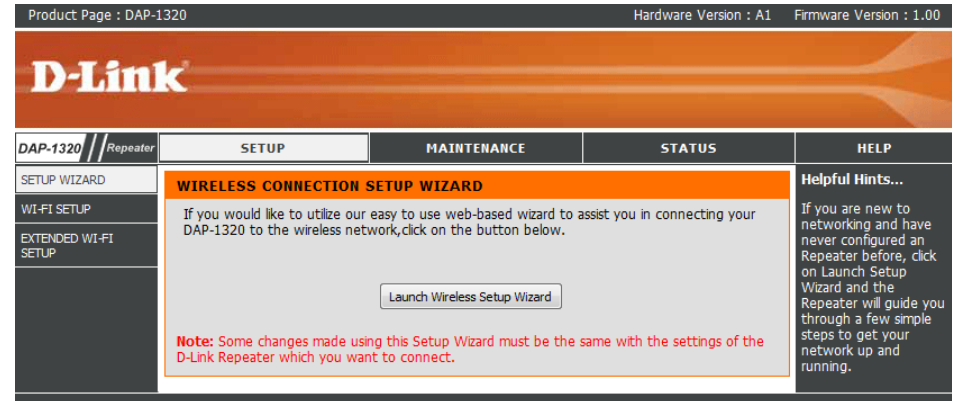
**REBOOTING**

Please wait 46 seconds.

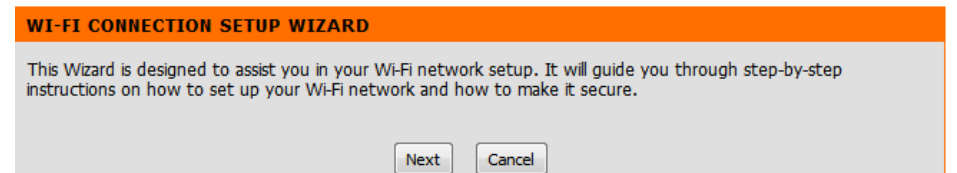


# Quick Setup Wizard

Click **Launch Wireless Setup Wizard** to begin the Setup Wizard.

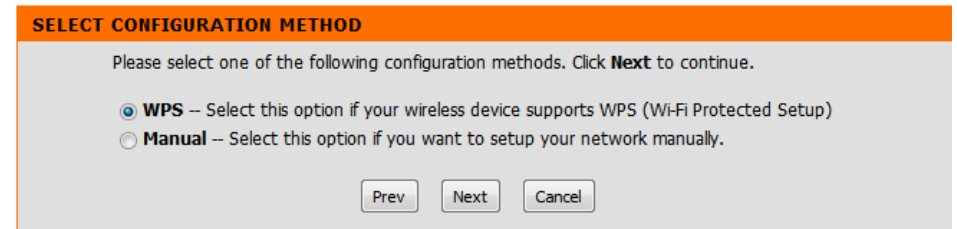


To start the Setup Wizard click Next.

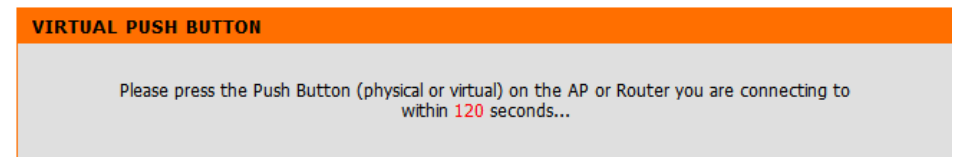


Select **WPS** as the configuration method only if your wireless device supports Wi-Fi Protected Setup (WPS).

Click **Next** to continue.



Press down the **Push Button** on the Wireless device you are adding to your wireless network.



Select **Manual** as the configuration method to set up your network manually.

Click **Next** to continue.

**SELECT CONFIGURATION METHOD**

Please select one of the following configuration methods. Click **Next** to continue.

**WPS** – Select this option if your wireless device supports WPS (Wi-Fi Protected Setup)  
 **Manual** – Select this option if you want to setup your network manually.

**SELECT WI-FI NETWORK**

Scanning for available Wi-Fi network...

Select the network you would like your device to connect to and click **Connect** to continue.

**SELECT WI-FI NETWORK**

| ID | Wi-Fi Network Name   | Wi-Fi Security Mode | Channel | Signal(%) | Select                |
|----|----------------------|---------------------|---------|-----------|-----------------------|
| 1  | Apple Network c3af3a | NONE                | 9       | 100       | <input type="radio"/> |
| 3  | 00265a493e1e         | WPA2-PSK            | 11      | 100       | <input type="radio"/> |
| 4  | vanilla              | WEP                 | 11      | 100       | <input type="radio"/> |
| 5  | fc75164f5aa9         | WPA2-PSK(auto)      | 1       | 100       | <input type="radio"/> |
| 6  | vanilla              | WEP                 | 11      | 100       | <input type="radio"/> |
| 7  | m-lounge             | WPA/WPA2-PSK        | 11      | 100       | <input type="radio"/> |
| 9  | AhhhRealMonsters     | WPA-PSK(auto)       | 11      | 100       | <input type="radio"/> |
| 10 | dlink_DIR-506L       | WPA-PSK(auto)       | 11      | 100       | <input type="radio"/> |
| 11 | vanilla              | WEP                 | 6       | 100       | <input type="radio"/> |
| 13 | fc75164f5bc9         | WPA2-PSK(auto)      | 11      | 100       | <input type="radio"/> |
| 14 | vanilla              | WEP                 | 11      | 100       | <input type="radio"/> |
| 15 | telus045             | WPA-PSK             | 1       | 100       | <input type="radio"/> |
| 18 | dlink                | NONE                | 8       | 70        | <input type="radio"/> |

Enter the existing Wi-Fi Password for the router you are using to connect and click **Next**.

**ENTER WI-FI PASSWORD**

Please enter Wi-Fi Password to establish wireless connection

Wi-Fi Password:

Prev Next Cancel

You can choose to change the SSID and the password for the DAP-1320 or you can enter the information found in your configuration card. Click **Next** to continue and finish the setup process.

**PLEASE ENTER THE SETTINGS FOR THE EXTENDED NETWORK**

Give your Extended Wi-Fi network a name.

Extended Wi-Fi Network Name (SSID) :  
dlink-79B4 (Using up to 32 characters)

Give your Extended Wi-Fi network a password.

Wi-Fi Password :  
79b41234 (Between 8 and 63 characters)

Use the same Wi-Fi Network Name for the Extended Network.

Prev Next Cancel

The setup is now complete. Please keep Save to finish.

**SETUP COMPLETE**

Please take a note of following summary of your Wi-Fi Security settings for future reference.

Wi-Fi Network Name(SSID) : vanilla  
Wi-Fi Password : dlink

Extended Wi-Fi Network Name(SSID) : dlink-79B4  
Wi-Fi Password : 79b41234

Prev Save Cancel

Please wait while the system reboots.

**REBOOTING**

Please wait 46 seconds.

# Setup

## Wi-Fi Setup

Use this section to manually configure the wireless settings for your D-Link Repeater.

|                         |  |   |  |  |  |
|-------------------------|--|---|--|--|--|
| Product Page : DAP-1320 |  | Hardware Version : A1   |  | Firmware Version : 1.00  |  |
| <b>D-Link</b>           |  |   |  |  |  |
| DAP-1320 // Repeater    |  | SETUP   |  | MAINTENANCE  |  |
| STATUS                  |  | HELP  |  |  |  |
| SETUP WIZARD            |  | <b>WI-FI</b>  |  | Helpful Hints...   |  |
| WI-FI SETUP             |  | <p>Use this section to configure the Wi-Fi settings for your D-Link Repeater. Please note that changes made on this section will also need to be duplicated to your wireless clients and PC.</p> <p>Save Settings    Don't Save Settings</p>  |  | <p>Changing your Wireless Network Name is the first step in securing your wireless network. Change it to a familiar name that does not contain any personal information.</p>   |  |
| EXTENDED WI-FI SETUP    |  | <b>WI-FI NETWORK SETTINGS</b>   |  | <p>Enable Auto Channel Scan so that the Repeater can select the best possible channel for your wireless network to operate on.</p>   |  |
|                         |  | <p>Wireless Mode: <b>Repeater Mode</b>    Site Survey</p> <p>Wi-Fi Network Name: <input type="text" value="vanilla"/> (Also called the SSID)</p> <p>Channel Width: <input type="text" value="Auto 20/40 MHz"/></p>  |  | <p>Visibility Status is another way to secure your network. With invisible option enabled, no wireless clients will be able to see your wireless network when they perform scan to see what's available. In order for your wireless devices to connect to your Repeater, you will need to manually enter the Wireless Network Name on each device.</p> |  |
|                         |  | <b>WIRELESS SECURITY MODE</b>   |  | <p>If you have enabled Wireless Security, make sure you write down the Key or Passphrase that you have configured. You will need to enter this information on any wireless device that you connect to your wireless network.</p>   |  |
|                         |  | <p>Security Mode: <input type="text" value="WEP"/></p>  |  |  |  |
|                         |  | <b>WEP</b>  |  |  |  |
|                         |  | <p>WEP is the wireless encryption standard. To use it you must enter the same key(s) into the router and the wireless stations. For 64 bit keys you must enter 10 hex digits into each key box. For 128 bit keys you must enter 26 hex digits into each key box. A hex digit is either a number from 0 to 9 or a letter from A to F. For the most secure use of WEP set the authentication type to "Shared Key" when WEP is enabled.</p> <p>You may also enter any text string into a WEP key box, in which case it will be converted into a hexadecimal key using the ASCII values of the characters. A maximum of 5 text characters can be entered for 64 bit keys, and a maximum of 13 characters for 128 bit keys.</p> <p>If you choose the WEP security option this device will <b>ONLY</b> operate in <b>Legacy Wireless mode (802.11B/G)</b>. This means you will <b>NOT</b> get 11N performance due to the fact that WEP is not supported by the Draft 11N specification.</p> |  |  |  |
|                         |  | <p>WEP Key Length: <input type="text" value="64 bit (5 ascii characters)"/> (length applies to all keys)</p> <p>Wep Key 1: <input type="text" value="*****"/></p> <p>Authentication: <input type="text" value="Both"/></p>  |  |  |  |
|                         |  | <b>WIFI PROTECTED SETUP (ALSO CALLED WCN 2.0 IN WINDOWS VISTA)</b>  |  |  |  |
|                         |  | <p>Enable: <input checked="" type="checkbox"/></p> <p><input type="button" value="Process WPS"/></p>  |  |  |  |
| <b>WIRELESS</b>         |  |   |  |  |  |

**Wireless Mode:** This will automatically be **Repeater Mode**.

**Site Surveys:** Scans for available Wi-Fi networks.

**Wireless Network Name:** When you are browsing for available wireless networks, this is the name that will appear in the list (unless Visibility Status is set to Invisible, see below). This name is also referred to as the SSID. For security purposes, it is highly recommended to change from the default network name.

**Channel Width:** Select the appropriate channel width between **20MHz** or **Auto 20/40MHz** from the drop-down menu.

**Security Mode:** Select **WEP** or **WPA Personal**. Refer to page 88.

**WI-FI NETWORK SETTINGS**

**Wireless Mode :** Repeater Mode

**Wi-Fi Network Name :** vanilla  (Also called the SSID)

**Channel Width :** Auto 20/40 MHz

**WIRELESS SECURITY MODE**

**Security Mode :** WEP

**WEP**

WEP is the wireless encryption standard. To use it you must enter the same key(s) into the router and the wireless stations. For 64 bit keys you must enter 10 hex digits into each key box. For 128 bit keys you must enter 26 hex digits into each key box. A hex digit is either a number from 0 to 9 or a letter from A to F. For the most secure use of WEP set the authentication type to "Shared Key" when WEP is enabled.

You may also enter any text string into a WEP key box, in which case it will be converted into a hexadecimal key using the ASCII values of the characters. A maximum of 5 text characters can be entered for 64 bit keys, and a maximum of 13 characters for 128 bit keys.

If you choose the WEP security option this device will **ONLY** operate in **Legacy Wireless mode (802.11B/G)**. This means you will **NOT** get 11N performance due to the fact that WEP is not supported by the Draft 11N specification.

**WEP Key Length :** 64 bit (5 ascii characters)  (length applies to all keys)

**Wep Key 1 :** \*\*\*\*\*

**Authentication :** Both

**WIFI PROTECTED SETUP (ALSO CALLED WCN 2.0 IN WINDOWS VISTA)**

**Enable :**

# Extended Wi-Fi Setup

This page allows you to configure the wireless LAN Settings for your D-Link AP. You have the option of creating a new Wi-Fi Network Name for your DAP-1320 or you may use the same Wi-Fi Network Name as your repeater or router.

**Wi-Fi Network Name:** Displays the current Wi-Fi Network Name you connected to during configuration.

**Extended Wi-Fi Network Name:** Select **Same as Wi-Fi Network Name** or **Create a new Network Name: Wi-Fi Network Name**.

**Channel Width:** Select the appropriate channel width between 20MHz or Auto 20/40MHz from the drop-down menu.

| Product Page : DAP-1320 |  | Hardware Version : A1   |             | Firmware Version : 1.00 |  |
|-------------------------|--|---|-------------|-------------------------|--|
| <b>D-Link</b>           |  |   |             |                         |  |
| DAP-1320 // Repeater    |  | SETUP   | MAINTENANCE | STATUS                  | HELP   |
| SETUP WIZARD            |  | <b>EXTENDED WI-FI</b>   |             |                         | Helpful Hints...   |
| WI-FI SETUP             |  | <p>Use This Section to configure the wireless LAN settings for you D-Link AP. You can create a new Wi-Fi Network Name(SSID) for your Extended Wi-Fi Network or use the same Wi-Fi Network Name(SSID) as the joined Repeater for your Extended Wi-Fi Network. Please note that changes made on this section will also need to be duplicated to your wireless clients and PC.</p> <p>Save Settings    Don't Save Settings</p> |             |                         | Changing your Wireless Network Name is the first step in securing your wireless network. Change it to a familiar name that does not contain any personal information.  |
| EXTENDED WI-FI SETUP    |  | <p><b>EXTENDED WI-FI NETWORK SETTINGS</b></p> <p>Wi-Fi Network Name : vanilla</p> <p>Extended Wi-Fi Network Name : <input type="radio"/> Same as Wi-Fi Network Name <input checked="" type="radio"/> Create a new Wi-Fi Network Name</p> <p><input type="text" value="dlink-79B4"/></p> <p>Channel Width : Auto 20/40 MHz</p>   |             |                         | Enable Auto Channel Scan so that the Repeater can select the best possible channel for your wireless network to operate on.  |
|                         |  | <p><b>WIRELESS SECURITY MODE</b></p> <p>Security Mode : WPA/WPA2-Personal</p>   |             |                         | Visibility Status is another way to secure your network. With invisible option enabled, no wireless clients will be able to see your wireless network when they perform scan to see what's available. In order for your wireless devices to connect to |

# Wireless Security

This section will show you the different levels of security you can use to protect your data from intruders. The DAP-1320 offers the following types of security:

- WPA2 (Wi-Fi Protected Access 2)
- WPA (Wi-Fi Protected Access)
- WEP (Wired Equivalent Privacy)
- WPA2-PSK (Pre-Shared Key)
- WPA-PSK (Pre-Shared Key)

## What is WEP?

WEP stands for Wired Equivalent Privacy. It is based on the IEEE 802.11 standard and uses the RC4 encryption algorithm. WEP provides security by encrypting data over your wireless network so that it is protected as it is transmitted from one wireless device to another.

To gain access to a WEP network, you must know the key. The key is a string of characters that you create. When using WEP, you must determine the level of encryption. The type of encryption determines the key length. 128-bit encryption requires a longer key than 64-bit encryption. Keys are defined by entering in a string in HEX (hexadecimal - using characters 0-9, A-F) or ASCII (American Standard Code for Information Interchange – alphanumeric characters) format. ASCII format is provided so you can enter a string that is easier to remember. The ASCII string is converted to HEX for use over the network. Four keys can be defined so that you can change keys easily.

# Configure WEP

It is recommended to enable encryption on your wireless router before your wireless network adapters. Please establish wireless connectivity before enabling encryption. Your wireless signal may degrade when enabling encryption due to the added overhead.

1. Log into the web-based configuration by opening a web browser and entering the IP address of the router (192.168.0.1). Click on Wireless Setup on the left side.
2. In the **Security Mode** section, select **WEP** from the drop-down menu.
3. In **WEP Key Length**, select either 64Bit or 128Bit encryption from the drop-down menu.
5. Next to **WEP Key 1**, enter a WEP key that you create. Make sure you enter this key exactly on all your wireless devices. You may enter up to four different keys either using Hex or ASCII. Hex is recommended (letters A-F and numbers 0-9 are valid). In ASCII all numbers and letters are valid.
6. Click **Save Settings** to save your settings. If you are configuring the router with a wireless adapter, you will lose connectivity until you enable WEP on your adapter and enter the same WEP key as you did on the router.

The screenshot displays the router's configuration interface for wireless security. It is divided into three main sections:

- WIRELESS SECURITY MODE:** A dropdown menu labeled "Security Mode" is set to "WEP".
- WEP:** This section contains explanatory text about WEP encryption, instructions on key length (10 hex digits for 64-bit, 26 hex digits for 128-bit), and a note that WEP only operates in Legacy Wireless mode (802.11B/G). Below the text are three input fields: "WEP Key Length" set to "64 bit (5 ascii characters)", "Wep Key 1" containing five asterisks, and "Authentication" set to "Both".
- WIFI PROTECTED SETUP (ALSO CALLED WCN 2.0 IN WINDOWS VISTA):** This section has an "Enable" checkbox checked and a "Process WPS" button.



# Configure WPA/WPA2 Personal

It is recommended to enable encryption on your wireless access point before your wireless network adapters. Please establish wireless connectivity before enabling encryption. Your wireless signal may degrade when enabling encryption due to the added overhead.

1. Log into the web-based configuration by opening a web browser and entering the IP address of the access point (192.168.0.50). Click on Setup and then click Wireless Settings on the left side.
2. Next to *Security Mode*, select **WPA-Personal**.
3. Next to *Cipher Type*, select **TKIP, AES, or Auto**.
4. Next to *Passphrase*, enter a key. The key is entered as a passphrase in ASCII format at both ends of the wireless connection. The passphrase must be between 8-63 characters.
6. Click **Save Settings** at the top of the window to save your settings. If you are configuring the access point with a wireless adapter, you will lose connectivity until you enable WPA-PSK on your adapter and enter the same passphrase as you did on the access point.

The screenshot displays three sections of a web-based configuration interface:

- WIRELESS SECURITY MODE:** A dropdown menu is set to "WPA/WPA2-Personal".
- WPA:** A text box explains that using "Auto WPA or WPA2 (TKIP and AES)" mode provides a balance of security and compatibility. Below this, a text box prompts the user to "Enter an 8 to 63 character alphanumeric pass-phrase. For good security it should be of ample length and should not be a commonly known phrase." A "Pre-Shared Key" field contains seven dots.
- WIFI PROTECTED SETUP (ALSO CALLED WCN 2.0 IN WINDOWS VISTA):** An "Enable" checkbox is checked. Below it is a "Process WPS" button.

# Maintenance Admin

This page will allow you to change the Administrator password. The administrator password has read/write access.

**Password:** Enter a new password for the Administrator Login Name. The administrator can make changes to the settings.

**Confirm Password:** Enter the same password that you entered in the previous textbox in order to confirm its accuracy.

**Enable Graphical Authentication:** Check to enable this feature.

Product Page : DAP-1320 Hardware Version : A1 Firmware Version : 1.0

**D-Link**

DAP-1320 // Repeater SETUP MAINTENANCE STATUS HELP

**ADMINISTRATOR SETTINGS**

Enter the new password in the "New Password" field and again in the next field to confirm. Click on "Save Settings" to execute the password change. The Password is case-sensitive, and can be made up of any keyboard characters. The new password must be between 0 and 15 characters in length.

Save Settings Don't Save Settings

**ADMIN PASSWORD**

Please enter the same password into both boxes, for confirmation.

New Password :

Verify Password :

**ADMINISTRATION**

Enable Graphical Authentication :

**WIRELESS**

**Helpful Hints...**

**Passwords:** For security reasons, is recommended that you change the Password for the Administrator account. Be sure to write down the Passwords to avoid having to reset the Repeater in the event that they are forgotten.

# System

**Save to Local Hard Drive:** Use this option to save the current repeater configuration settings to a file on the hard disk of the computer you are using. Click the **Save** button. You will then see a file dialog where you can select a location and file name for the settings.

**Upload from Local Hard Drive:** Use this option to load previously saved access point configuration settings. Click **Browse** to find a previously saved configuration file. Then, click the **Upload Settings** button to transfer those settings to the repeater.

**Restore to Factory Default:** This option will restore all configuration settings back to the settings that were in effect at the time the access point was shipped from the factory. Any settings that have not been saved will be lost, including any rules that you have created. If you want to save the current access point configuration settings, use the **Save** button above.

**Note:** Restoring the factory default settings will not reset the Wi-Fi Protected Status to Not Configured.

**Reboot the Device:** Click to reboot the repeater.

The screenshot displays the D-Link DAP-1320 Repeater web interface. At the top, it shows 'Product Page : DAP-1320', 'Hardware Version : A1', and 'Firmware Version : 1.00'. The D-Link logo is prominently displayed. Below the logo is a navigation menu with tabs for 'DAP-1320 Repeater', 'SETUP', 'MAINTENANCE', 'STATUS', and 'HELP'. The 'MAINTENANCE' tab is selected, and the 'SAVE AND RESTORE' sub-tab is active. The main content area contains the following sections:

- SAVE AND RESTORE** (Header): A message stating, 'The current system settings can be saved as a file onto the local hard drive. You can upload any save settings file that was created by the DAP-1320.'
- SAVE AND RESTORE** (Section Header): A sub-section containing several options:
  - Save Settings To Local Hard Drive :** Includes a 'Save' button.
  - Load Settings From Local Hard Drive :** Includes a text input field and a 'Browse...' button.
  - Upload Settings :** Includes an 'Upload Settings' button.
  - Restore To Factory Default Settings :** Includes a 'Restore Device' button.
  - Reboot The Device :** Includes a 'Reboot' button.
  - Clear Language Pack :** Includes a 'Clear' button.

On the right side of the interface, there is a 'Helpful Hints...' section titled 'Saving System Settings'. The text reads: 'Once your Repeater is configured the way you want it, you can save these settings to a configuration file that can later be loaded in the event that the Repeater's default settings are restored. To do this, click the Save button next to where it says Save Settings to Local Hard Drive.'

The bottom of the page features a dark grey bar with the word 'WIRELESS' in white capital letters.

# Firmware

You can upgrade the firmware of the repeater here. Make sure the firmware you want to use is on the local hard drive of the computer. Click on **Browse** to locate the firmware file to be used for the update. Please check the D-Link support website for firmware updates at <http://support.dlink.com>. You can download firmware upgrades to your hard drive from this site.

**Firmware Upgrade:** Click on **Check Now to find out if there is an updated** firmware; if so, download the new firmware to your hard drive.

**Browse:** After you have downloaded the new firmware, click **Browse** to locate the firmware update on your hard drive. Click **Upload** to complete the firmware upgrade.

**Upload:** Once you have a firmware update on your computer, use this option to browse for the file and then upload the information into the access point.

## Language Pack

You can change the language of the web UI by uploading available language packs.

**Browse:** After you have downloaded the new language pack, click **Browse** to locate the language pack file on your hard drive. Click **Upload** to complete the language pack upgrade.

The screenshot displays the D-Link web interface for a DAP-1320 Repeater. The top navigation bar includes 'D-Link', 'DAP-1320 Repeater', and tabs for 'SETUP', 'MAINTENANCE', 'STATUS', and 'HELP'. A left sidebar contains 'ADMIN', 'SYSTEM', 'FIRMWARE', and 'TIME'. The main content area is divided into several sections:

- FIRMWARE:** A notification box states: "There may be new firmware for your DAP-1320 to improve functionality and performance. [Click here to check for an upgrade on our support site.](#) After you have download the new firmware file from our support site, click the Browse button below to find the firmware file on your local hard drive. Click the Upload button to update the firmware on the DAP-1320. **Do not update firmware through wireless network!!**"
- FIRMWARE AND LANGUAGE PACK INFORMATION:** Shows "Current Firmware Version : 1.00" and "Date : 2012/8/1". It also indicates "Current Language Pack Version : No Language Pack" and includes a "Check Online Now for Latest Firmware and Language pack version :
- FIRMWARE UPGRADE:** Contains a red note: "Note: Some firmware upgrades reset the configuration options to the factory defaults. Before performing an upgrade, be sure to save the current configuration from the [Maintenance — System](#) screen." Below this, it instructs: "To upgrade the firmware, your PC must have a wired connection to the Repeater. Enter the name of the firmware upgrade file, and click on the Upload button." There is an "Upload:" field with a "Browse..." button and an "Upload" button.
- LANGUAGE PACK UPGRADE:** Similar to the firmware section, it has an "Upload:" field with a "Browse..." button and an "Upload" button.
- Helpful Hints...:** A sidebar note titled "Firmware Updates:" explains that updates are released periodically to improve functionality and add features, but warns that updates can cause problems with specific features. It advises users to check the support site for updates and to save current configuration before upgrading.

The bottom of the interface features a "WIRELESS" status bar.

# Time

The Time Configuration option allows you to configure, update, and maintain the correct time on the internal system clock. From this section you can set the time zone that you are in. Daylight Saving can also be configured to automatically adjust the time when needed.

**Time Zone:** Select the Time Zone from the drop-down menu.

**Daylight Saving:** To select Daylight Saving time manually, click the **Enable Daylight Saving** check box. Next use the drop-down menu to select a Daylight Saving Offset and then enter a start date and an end date for daylight saving time.

**Enable NTP Server:** NTP is short for Network Time Protocol. NTP synchronizes computer clock times in a network of computers. Check this box to use a NTP server. This will only connect to a server on the Internet, not a local server.

**NTP Server Used:** Enter the NTP server or select one from the drop-down menu.

**Date and Time:** To manually input the time, enter the values in these fields for the Year, Month, Day, Hour, Minute, and Second and then click **Save Settings**. You can also click the **Copy Your Computer's Time Settings** button at the bottom of the screen.

Product Page : DAP-1320 Hardware Version : A1 Firmware Version : 1.00

**D-Link**

DAP-1320 // Repeater SETUP MAINTENANCE STATUS HELP

ADMIN  
SYSTEM  
FIRMWARE  
TIME

**TIME**

The Time Configuration option allows you to configure, update, and maintain the correct time on the internal system clock. From this section you can set the time zone that you are in and set the NTP (Network Time Protocol) Server. Daylight Saving can also be configured to automatically adjust the time when needed.

Save Settings Don't Save Settings

**TIME CONFIGURATION**

Current Time : Jan/01/2011 00:29:21

Time Zone : (GMT-08:00) Pacific Time (US/Canada), Tijuana

Enable Daylight Saving :

Daylight Saving Offset : +1:00

Daylight Saving Dates :

|           | Month | Week | Day of Week | Time |
|-----------|-------|------|-------------|------|
| DST Start | Mar   | 3rd  | Sun         | 1 AM |
| DST End   | Nov   | 2nd  | Sun         | 1 AM |

**AUTOMATIC TIME CONFIGURATION**

Enable NTP Server :

NTP Server Used : << Select NTP Server

**SET THE DATE AND TIME MANUALLY**

Date And Time : Year 2011 Month Jan Day 01

Hour 00 Minute 00 Second 00

Copy Your Computer's Time Settings

WIRELESS

Helpful Hints...  
**System Time Settings:**  
This section allows admins to configure, update, and maintain the correct time on the Repeater's internal system clock.

# Status

## Device Info

This page displays the current information for the DAP-1320. It will display the LAN and wireless LAN information.

**General:** Displays the access point's time and firmware version.

**LAN:** Displays the MAC address and the private (local) IP settings for the access point.

**Wireless LAN:** Displays the wireless MAC address and your wireless settings such as SSID and Channel.

The screenshot shows the D-Link web interface for a DAP-1320 Repeater. The top navigation bar includes 'D-Link', 'DAP-1320 Repeater', and tabs for 'SETUP', 'MAINTENANCE', 'STATUS', and 'HELP'. The 'STATUS' tab is selected, and the 'DEVICE INFORMATION' section is highlighted in orange. Below this, a message states: 'All of your wireless and network connection details are displayed on this page. The firmware version is also displayed here.' The left sidebar contains links for 'DEVICE INFO', 'LOGS', 'STATISTICS', and 'IPV6'. A 'Helpful Hints...' section on the right explains that LAN and wireless connection details are displayed here. The main content area is divided into three sections: 'GENERAL' (Time: Jan/01/2011 00:29:47, Firmware Version: 1.00, Wed, 1 Aug 2012), 'WI-FI NETWORK' (MAC Address: 02:18:e7:95:79:b4, Network Name (SSID): vanilla, Security Mode: Both / WEP 64bits, Channel Width: Auto 20/40 MHz, Channel: 6), and 'EXTENDED WI-FI NETWORK' (MAC Address: 00:18:e7:95:79:b4, Extended Wi-Fi Network Name (SSID): dlink-79B4, Connection: DHCP, IP Address: 192.168.0.147, Subnet Mask: 255.255.255.0, Default Gateway: 192.168.0.1, Primary DNS Server: 192.168.0.1, Secondary DNS Server: 0.0.0.0). A 'Wi-Fi Client list' table is partially visible at the bottom with columns for IP Address, MAC Address, and Name (if any).

# Logs

The DAP-1320 keeps a running log of events and activities occurring on the Repeater. If the Repeater is rebooted, the logs are automatically cleared. You can save the log files under Log Setting.

**Log Options:** There are several types of logs that can be viewed: **System Activity, Debug Information, Attacks, Dropped Packets** and **Notice**.

**First Page:** This button directs you to the first page of the log.

**Last Page:** This button directs you to the last page of the log.

**Previous Page:** This button directs you to the previous page of the log.

**Next Page:** This button directs you to the next page of the log.

**Clear Log:** This button clears all current log content.

**Log Settings:** This button opens a new menu where you can configure the log settings.

**Refresh:** This button refreshes the log.

**D-Link**

DAP-1320 // Repeater

SETUP MAINTENANCE STATUS HELP

DEVICE INFO LOGS STATISTICS IPV6

**LOGS**

Use this option to view the device logs. You can define what types of events you want to view and the event levels to view.

**LOG OPTIONS**

Log Type :  System Activity  Debug Information  Attacks  
 Dropped Packets  Notice

Apply Log Settings Now

**LOG DETAILS**

First Page Last Page Previous Next Clear Save Log

Refresh

1/12

| Time           | Message  |
|----------------|--|
| Jan 1 00:17:54 | Service D-Link DAP-1320 Configuration Utility (/var/etc/avahi/services/http.service) successfully established. |
| Jan 1 00:17:53 | Registering new address record for fe80::218:e7ff:fe95:79b4 on br0.*.  |
| Jan 1 00:17:53 | Registering new address record for fe80::218:e7ff:fe95:79b4 on br0.*.  |
| Jan 1 00:17:53 | New relevant interface br0.IPv6 for mDNS.  |
| Jan 1 00:17:53 | Joining mDNS multicast group on interface br0.IPv6 with address fe80::218:e7ff:fe95:79b4.                      |
| Jan 1 00:17:52 | Server startup complete. Host name is dlinkap.local. Local service cookie is 3434309714.                       |
| Jan 1 00:17:52 | Interface br0.IPv6 no longer relevant for mDNS.  |
| Jan 1 00:17:52 | Withdrawing address record for fe80::218:e7ff:fe95:79b4 on br0.  |
| Jan 1 00:17:52 | Withdrawing address record for fe80::218:e7ff:fe95:79b4 on br0.  |
| Jan 1 00:17:51 | using nameserver 192.168.0.1#53  |

Helpful Hints...  
Check the log frequently to detect unauthorized network usage.

# Statistics

The DAP-1320 keeps statistics of the traffic that passes through it. You can view the amount of packets that pass through the LAN and wireless portions of the network. The traffic counter will reset if the access point is rebooted.

The screenshot shows the D-Link DAP-1320 web interface. At the top, it displays 'Product Page : DAP-1320' and 'Hardware Version : A1 Firmware Version : 1.00'. The D-Link logo is prominently displayed. Below the logo, there are navigation tabs for 'DAP-1320 // Repeater', 'SETUP', 'MAINTENANCE', 'STATUS', and 'HELP'. The 'STATUS' tab is selected, and the 'STATISTICS' sub-tab is active. The main content area is divided into two sections: 'TRAFFIC STATISTICS' and 'WIRELESS STATISTICS'. The 'TRAFFIC STATISTICS' section includes a description and two buttons: 'Refresh Statistics' and 'Clear Statistics'. The 'WIRELESS STATISTICS' section contains a table with the following data:

|                      |      |                      |   |
|----------------------|------|----------------------|---|
| Sent :               | 930  | Received :           | 0 |
| TX Packets Dropped : | 3972 | RX Packets Dropped : | 0 |
| Collisions :         | 0    | Errors :             | 0 |

On the right side of the interface, there is a 'Helpful Hints...' section with the text: 'This is a summary of the number of packets that have passed between the Wireless and the LAN since the device was last initialized.' At the bottom of the page, the word 'WIRELESS' is displayed in a large, bold font.



# IPv6

This page displays all your IPv6 Internet and network connection information.

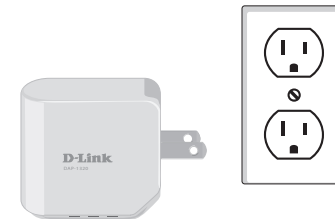
|  |  |   |   |
|--|--|---|---|
| Product Page : DAP-1320                                      |  | Hardware Version : A1 Firmware Version : 1.00 |   |
| <b>D-Link</b>  |  |   |   |
| <b>DAP-1320</b> // Repeater                                  | <b>SETUP</b>   | <b>MAINTENANCE</b>                            | <b>STATUS</b>   |
| <p>DEVICE INFO</p> <p>LOGS</p> <p>STATISTICS</p> <p>IPv6</p> | <p><b>IPv6 NETWORK INFORMATION</b></p> <p>All of your IPv6 Internet and network connection details are displayed on this page.</p>                                     |   | <p><b>Helpful Hints...</b></p> <p>This is a summary of the number of packets that have passed between the Wireless and the LAN since the device was last initialized.</p> |
|  | <p><b>IPv6 CONNECTION INFORMATION</b></p> <p><b>IPv6 CONNECTION TYPE :</b> Link-local only</p> <p><b>LAN IPv6 Link-Local Address :</b> FE80::218:E7FF:FE95:79B4/64</p> |   |   |
| <b>WIRELESS</b>  |  |   |   |

# Connect a Wireless Client to your Router

## WPS Button

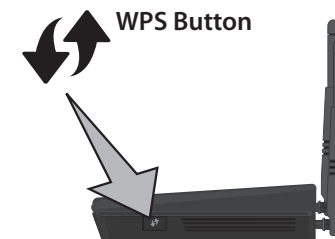
The easiest and most secure way to connect your wireless devices to the router is WPS (Wi-Fi Protected Setup). Most wireless devices such as wireless adapters, media players, Blu-ray DVD players, wireless printers and cameras will have a WPS button (or a software utility with WPS) that you can press to connect to the DAP-1320 router. Please refer to your user manual for the wireless device you want to connect to make sure you understand how to enable WPS. Once you know, follow the steps below:

**Step 1** - Plug the DAP-1320 into a wall outlet and verify if the power LED has turned from red to a blinking amber.

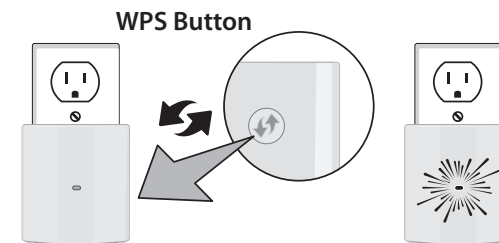


**Step 2** - Press the WPS button on your AP/Router.

**Note:** Usually the WPS LED will blink once it is pressed. Check your router's manual for more information.

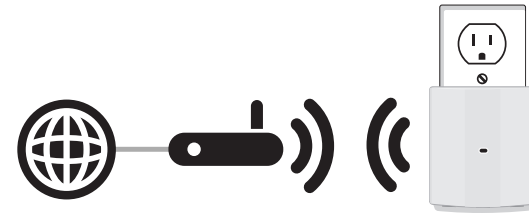


**Step 3** - Press and **hold** the WPS button until the light starts blinking green and then release. Please allow up to two minutes for the WPS process to finish. Once the connection is successful the LED will be solid green.



**Step 4** - Your AP/Router and DAP-1320 will be connected when the LED light turns solid green.

**Note:** If connection fails, try moving your DAP-1320 closer to your wireless router/access point and repeat steps 2 and 3.



**Step 5** - To connect wireless clients to the DAP-1320, use the SSID and security key information located on your configuration card.

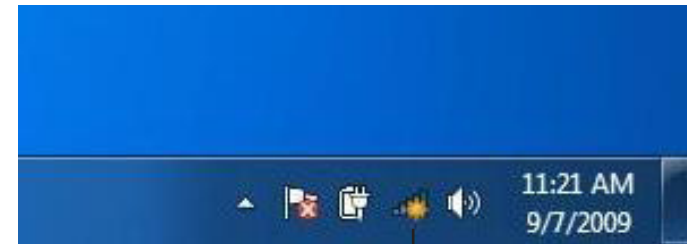


# Windows® 7

## WPA/WPA2

It is recommended to enable wireless security (WPA/WPA2) on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the security key or passphrase being used.

1. Click on the wireless icon in your system tray (lower-right corner).



Wireless Icon

2. The utility will display any available wireless networks in your area.



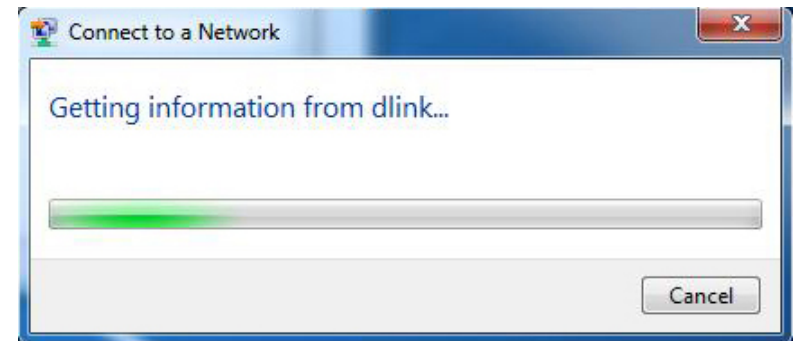
3. Highlight the wireless network (SSID) you would like to connect to and click the **Connect** button.

If you get a good signal but cannot access the Internet, check your TCP/IP settings for your wireless adapter. Refer to the Networking Basics section in this manual for more information.

**Note:** You can find the SSID and password on the configuration card.

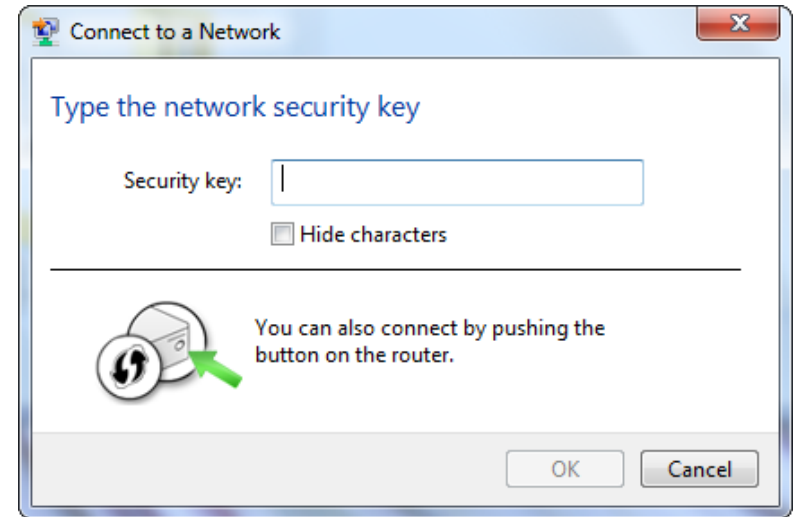


4. The following window appears while your computer tries to connect to the router.



5. Enter the security key or passphrase that is on your configuration card and click **Connect**. You can also connect by pushing the WPS button on the DAP-1320.

It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the security settings are correct. The key or passphrase must be exactly the same as on the wireless router.



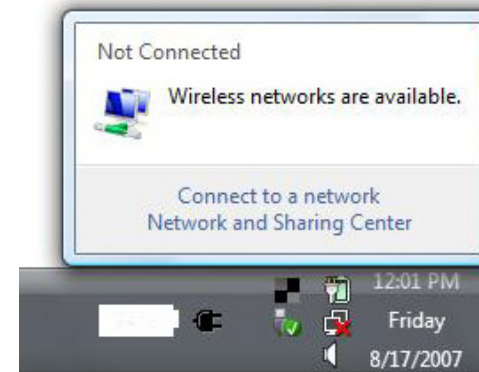
# Windows Vista®

Windows Vista® users may use the built-in wireless utility. If you are using another company's utility or Windows® 2000, please refer to the user manual of your wireless adapter for help with connecting to a wireless network. Most utilities will have a "site survey" option similar to the Windows Vista® utility as seen below.

If you receive the **Wireless Networks Detected** bubble, click on the center of the bubble to access the utility.

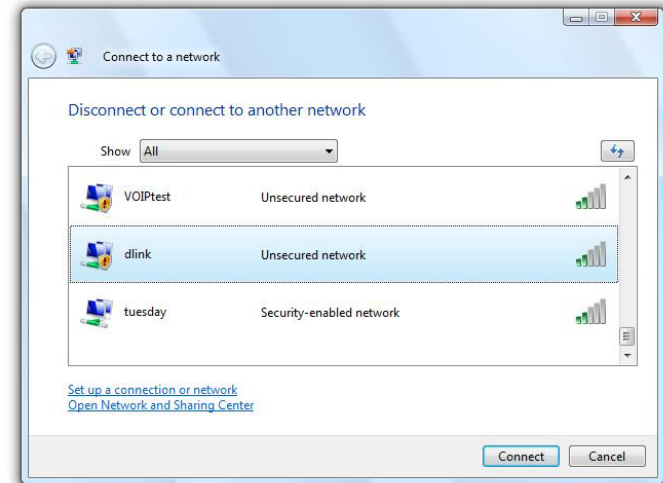
or

Right-click on the wireless computer icon in your system tray (lower-right corner next to the time). Select **Connect to a network**.



The utility will display any available wireless networks in your area. Click on a network (displayed using the SSID) and click the **Connect** button.

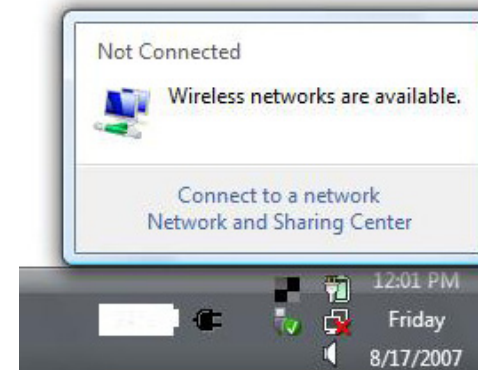
If you get a good signal but cannot access the Internet, check you TCP/IP settings for your wireless adapter. Refer to the **Networking Basics** section in this manual for more information.



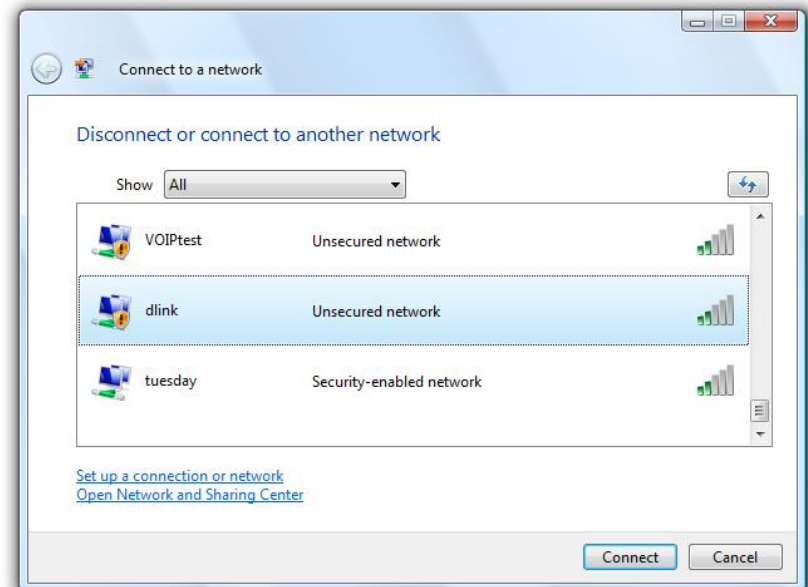
## WPA/WPA2

It is recommended to enable wireless security (WPA/WPA2) on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the security key or passphrase being used.

1. Open the Windows Vista® Wireless Utility by right-clicking on the wireless computer icon in your system tray (lower right corner of screen). Select **Connect to a network**.



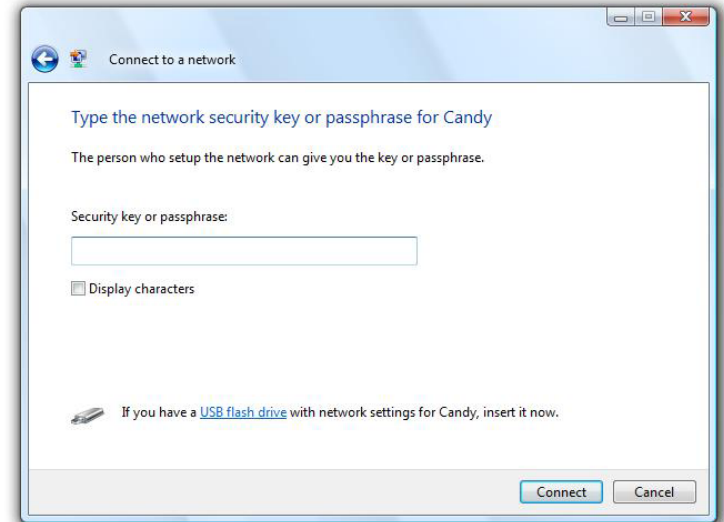
2. Highlight the wireless network (SSID) you would like to connect to and click **Connect**.





3. Enter the same security key or passphrase that is on your router and click **Connect**.

It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the security settings are correct. The key or passphrase must be exactly the same as on the wireless router.

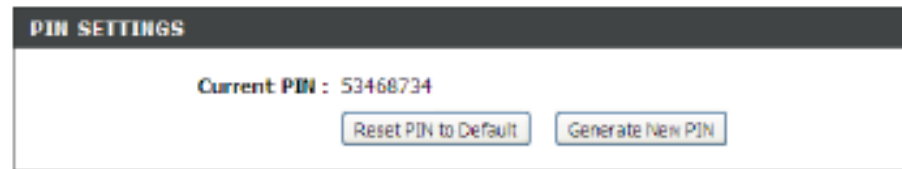


## WPS/WCN 2.0

The router supports Wi-Fi protection, referred to as WCN 2.0 in Windows Vista®. The following instructions for setting this up depends on whether you are using Windows Vista® to configure the router or third party software.

When you first set up the router, Wi-Fi protection is disabled and unconfigured. To enjoy the benefits of Wi-Fi protection, the router must be both enabled and configured. There are three basic methods to accomplish this: use Windows Vista's built-in support for WCN 2.0, use software provided by a third party, or manually configure.

If you are running Windows Vista®, log into the router and click the **Enable** checkbox in the **Basic > Wireless** section. Use the Current PIN that is displayed on the **Advanced > Wi-Fi Protected Setup** section or choose to click the **Generate New PIN** button or **Reset PIN to Default** button.



If you are using third party software to set up Wi-Fi Protection, carefully follow the directions. When you are finished, proceed to the next section to set up the newly-configured router.

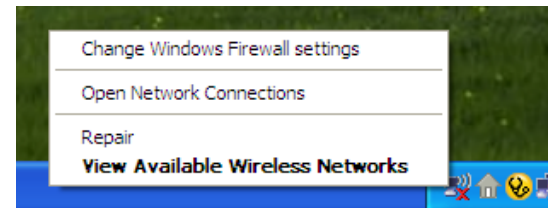
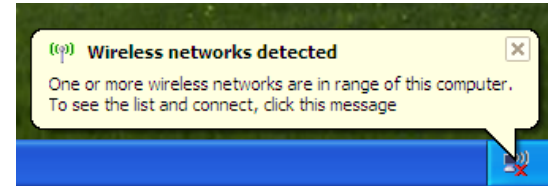
# Windows® XP

Windows® XP users may use the built-in wireless utility (Zero Configuration Utility). The following instructions are for Service Pack 2 users. If you are using another company's utility, please refer to the user manual of your wireless adapter for help with connecting to a wireless network. Most utilities will have a "site survey" option similar to the Windows® XP utility as seen below.

If you receive the **Wireless Networks Detected** bubble, click on the center of the bubble to access the utility.

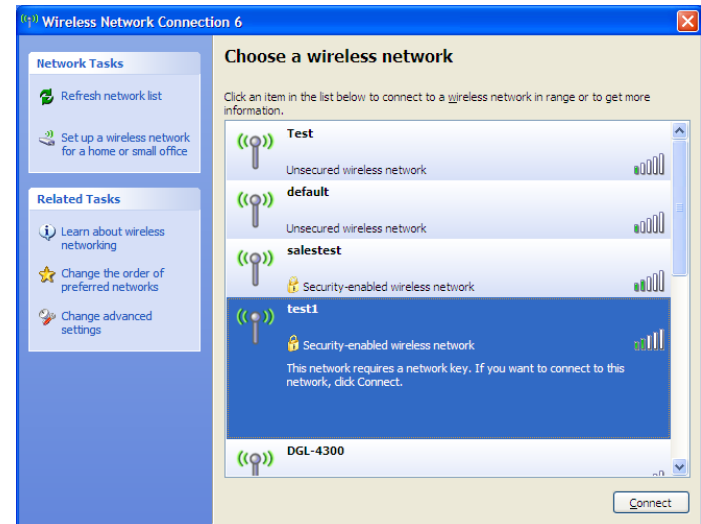
or

Right-click on the wireless computer icon in your system tray (lower-right corner next to the time). Select **View Available Wireless Networks**.



The utility will display any available wireless networks in your area. Click on a network (displayed using the SSID) and click the **Connect** button.

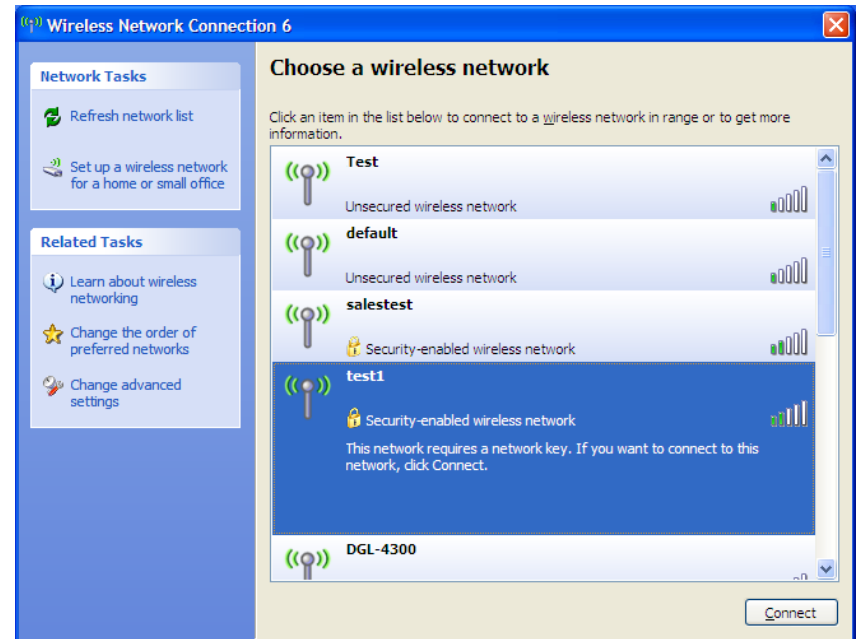
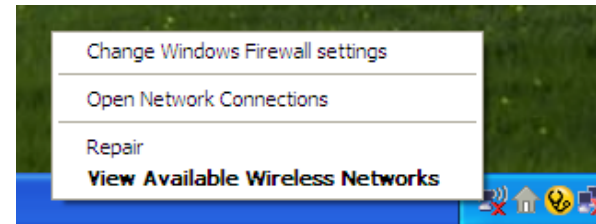
If you get a good signal but cannot access the Internet, check you TCP/IP settings for your wireless adapter. Refer to the **Networking Basics** section in this manual for more information.



## WPA/WPA2

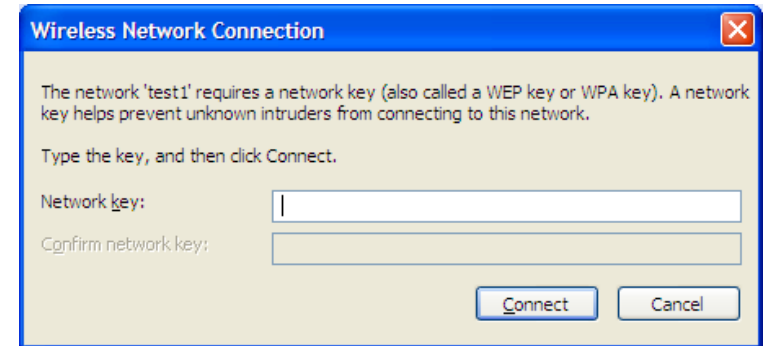
It is recommended to enable WPA on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the WPA key being used.

1. Open the Windows® XP Wireless Utility by right-clicking on the wireless computer icon in your system tray (lower-right corner of screen). Select **View Available Wireless Networks**.
2. Highlight the wireless network (SSID) you would like to connect to and click **Connect**.



3. The **Wireless Network Connection** box will appear. Enter the WPA-PSK passphrase and click **Connect**.

It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the WPA-PSK settings are correct. The WPA-PSK passphrase must be exactly the same as on the wireless router.



# Troubleshooting

This chapter provides solutions to problems that can occur during the installation and operation of the DAP-1320. Read the following descriptions if you are having problems. The examples below are illustrated in Windows® XP. If you have a different operating system, the screenshots on your computer will look similar to the following examples.

## 1. Why can't I access the web-based configuration utility?

When entering the IP address of the D-Link router (192.168.0.1 for example), you are not connecting to a website nor do you have to be connected to the Internet. The device has the utility built-in to a ROM chip in the device itself. Your computer must be on the same IP subnet to connect to the web-based utility.

- Make sure you have an updated Java-enabled web browser. We recommend the following:
  - Microsoft Internet Explorer® 6.0 and higher
  - Mozilla Firefox 3.0 and higher
  - Google™ Chrome 2.0 and higher
  - Apple Safari 4.0 and higher
- Verify physical connectivity by checking for solid link lights on the device. If you do not get a solid link light, try using a different cable or connect to a different port on the device if possible. If the computer is turned off, the link light may not be on.
- Disable any Internet security software running on the computer. Software firewalls such as Zone Alarm, Black Ice, Sygate, Norton Personal Firewall, and Windows® XP firewall may block access to the configuration pages. Check the help files included with your firewall software for more information on disabling or configuring it.

- Configure your Internet settings:
  - Go to **Start > Settings > Control Panel**. Double-click the **Internet Options** icon. From the **Security** tab, click the button to restore the settings to their defaults.
  - Click the **Connection** tab and set the dial-up option to Never Dial a Connection. Click the LAN Settings button. Make sure nothing is checked. Click **OK**.
  - Go to the **Advanced** tab and click the button to restore these settings to their defaults. Click **OK** three times.
  - Close your web browser (if open) and open it.
- Access the web management. Open your web browser and enter the IP address of your D-Link router in the address bar. This should open the login page for your web management.
- If you still cannot access the configuration, unplug the power to the router for 10 seconds and plug back in. Wait about 30 seconds and try accessing the configuration. If you have multiple computers, try connecting using a different computer.

## 2. What can I do if I forgot my password?

If you forgot your password, you must reset your router. Unfortunately this process will change all your settings back to the factory defaults.

To reset the router, locate the reset button (hole) on the rear panel of the unit. With the router powered on, use a paperclip to hold the button down for 10 seconds. Release the button and the router will go through its reboot process. Wait about 30 seconds to access the router. The default IP address is 192.168.0.50. When logging in, the username is **admin** and leave the password box empty.

# Wireless Basics

D-Link wireless products are based on industry standards to provide easy-to-use and compatible high-speed wireless connectivity within your home, business or public access wireless networks. Strictly adhering to the IEEE standard, the D-Link wireless family of products will allow you to securely access the data you want, when and where you want it. You will be able to enjoy the freedom that wireless networking delivers.

A wireless local area network (WLAN) is a cellular computer network that transmits and receives data with radio signals instead of wires. Wireless LANs are used increasingly in both home and office environments, and public areas such as airports, coffee shops and universities. Innovative ways to utilize WLAN technology are helping people to work and communicate more efficiently. Increased mobility and the absence of cabling and other fixed infrastructure have proven to be beneficial for many users.

Wireless users can use the same applications they use on a wired network. Wireless adapter cards used on laptop and desktop systems support the same protocols as Ethernet adapter cards.

Under many circumstances, it may be desirable for mobile network devices to link to a conventional Ethernet LAN in order to use servers, printers or an Internet connection supplied through the wired LAN. A Wireless Router is a device used to provide this link.



## **What is Wireless?**

Wireless or Wi-Fi technology is another way of connecting your computer to the network without using wires. Wi-Fi uses radio frequency to connect wirelessly, so you have the freedom to connect computers anywhere in your home or office network.

## **Why D-Link Wireless?**

D-Link is the worldwide leader and award winning designer, developer, and manufacturer of networking products. D-Link delivers the performance you need at a price you can afford. D-Link has all the products you need to build your network.

## **How does wireless work?**

Wireless works similar to how cordless phone work, through radio signals to transmit data from one point A to point B. But wireless technology has restrictions as to how you can access the network. You must be within the wireless network range area to be able to connect your computer. There are two different types of wireless networks Wireless Local Area Network (WLAN), and Wireless Personal Area Network (WPAN).

### **Wireless Local Area Network (WLAN)**

In a wireless local area network, a device called an Access Point (AP) connects computers to the network. The access point has a small antenna attached to it, which allows it to transmit data back and forth over radio signals. With an indoor access point as seen in the picture, the signal can travel up to 300 feet. With an outdoor access point the signal can reach out up to 30 miles to serve places like manufacturing plants, industrial locations, college and high school campuses, airports, golf courses, and many other outdoor venues.

## **Wireless Personal Area Network (WPAN)**

Bluetooth is the industry standard wireless technology used for WPAN. Bluetooth devices in WPAN operate in a range up to 30 feet away.

Compared to WLAN the speed and wireless operation range are both less than WLAN, but in return it doesn't use nearly as much power which makes it ideal for personal devices, such as mobile phones, PDAs, headphones, laptops, speakers, and other devices that operate on batteries.

## **Who uses wireless?**

Wireless technology has become so popular in recent years that almost everyone is using it, whether it's for home, office, business, D-Link has a wireless solution for it.

### **Home**

- Gives everyone at home broadband access
- Surf the web, check email, instant message, etc.
- Gets rid of the cables around the house
- Simple and easy to use

### **Small Office and Home Office**

- Stay on top of everything at home as you would at office
- Remotely access your office network from home
- Share Internet connection and printer with multiple computers
- No need to dedicate office space

## **Where is wireless used?**

Wireless technology is expanding everywhere not just at home or office. People like the freedom of mobility and it's becoming so popular that more and more public facilities now provide wireless access to attract people. The wireless connection in public places is usually called "hotspots".

Using a D-Link Cardbus Adapter with your laptop, you can access the hotspot to connect to Internet from remote locations like: Airports, Hotels, Coffee Shops, Libraries, Restaurants, and Convention Centers.

Wireless network is easy to setup, but if you're installing it for the first time it could be quite a task not knowing where to start. That's why we've put together a few setup steps and tips to help you through the process of setting up a wireless network.

## **Tips**

Here are a few things to keep in mind, when you install a wireless network.

### **Centralize your router or Access Point**

Make sure you place the router/access point in a centralized location within your network for the best performance. Try to place the router/access point as high as possible in the room, so the signal gets dispersed throughout your home. If you have a two-story home, you may need a repeater to boost the signal to extend the range.

### **Eliminate Interference**

Place home appliances such as cordless telephones, microwaves, and televisions as far away as possible from the router/access point. This would significantly reduce any interference that the appliances might cause since they operate on same frequency.

### **Security**

Don't let you next-door neighbors or intruders connect to your wireless network. Secure your wireless network by turning on the WPA or WEP security feature on the router. Refer to product manual for detail information on how to set it up.

# Networking Basics

## Check your IP address

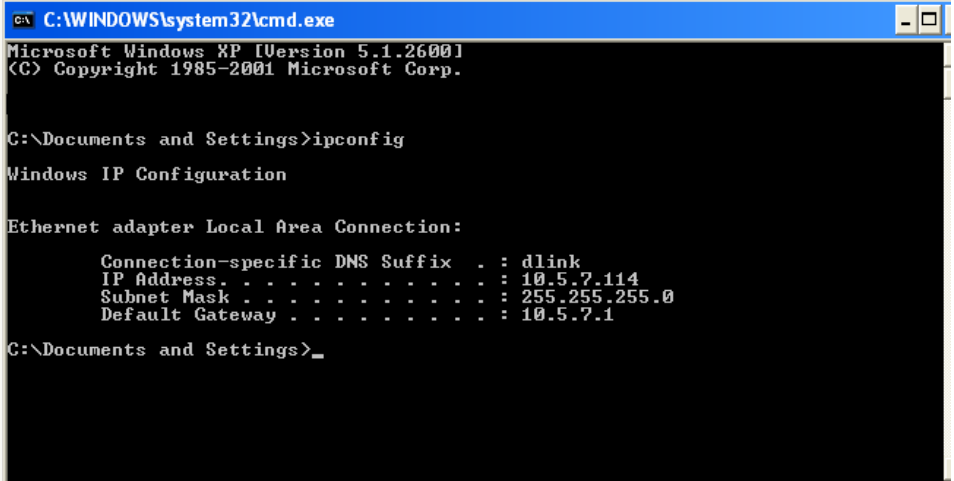
After you install your new D-Link adapter, by default, the TCP/IP settings should be set to obtain an IP address from a DHCP server (i.e. wireless router) automatically. To verify your IP address, please follow the steps below.

Click on **Start > Run**. In the run box type **cmd** and click **OK**. (Windows® 7/Vista® users type **cmd** in the **Start Search** box.)

At the prompt, type **ipconfig** and press **Enter**.

This will display the IP address, subnet mask, and the default gateway of your adapter.

If the address is 0.0.0.0, check your adapter installation, security settings, and the settings on your router. Some firewall software programs may block a DHCP request on newly installed adapters.



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings>ipconfig

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : dlink
    IP Address . . . . . : 10.5.7.114
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 10.5.7.1

C:\Documents and Settings>_
```

## Statically Assign an IP address

If you are not using a DHCP capable gateway/router, or you need to assign a static IP address, please follow the steps below:

- Step 1**
- Windows® 7 - Click on **Start > Control Panel > Network and Internet > Network and Sharing Center.**
  - Windows Vista® - Click on **Start > Control Panel > Network and Internet > Network and Sharing Center > Manage Network Connections.**
  - Windows® XP - Click on **Start > Control Panel > Network Connections.**
  - Windows® 2000 - From the desktop, right-click **My Network Places > Properties.**

**Step 2**  
Right-click on the **Local Area Connection** which represents your network adapter and select **Properties.**

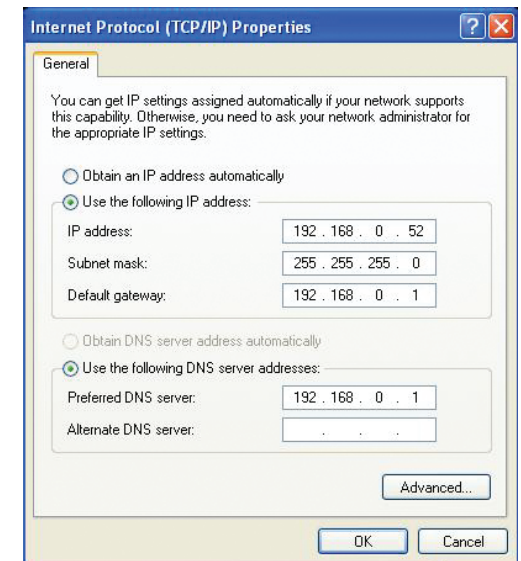
**Step 3**  
Highlight **Internet Protocol (TCP/IP)** and click **Properties.**

**Step 4**  
Click **Use the following IP address** and enter an IP address that is on the same subnet as your network or the LAN IP address on your router.

Example: If the router's LAN IP address is 192.168.0.1, make your IP address 192.168.0.X where X is a number between 2 and 99. Make sure that the number you choose is not in use on the network. Set the Default Gateway the same as the LAN IP address of your router (I.E. 192.168.0.1).

Set Primary DNS the same as the LAN IP address of your router (192.168.0.1). The Secondary DNS is not needed or you may enter a DNS server from your ISP.

**Step 5**  
Click **OK** twice to save your settings.



# Technical Specifications

## Standards

- IEEE 802.11n
- IEEE 802.11g
- IEEE 802.3
- IEEE 802.3u

## Wireless Frequency Range

- 2.4 GHz to 2.4835 GHz

## Antennas

- Internal Antenna

## Security

- Wi-Fi Protected Access (WPA/WPA2)
- WPS™ (PBC)

## Advanced Features

- Quick Router Setup app for iOS

## Device Management

- Web UI

## Diagnostic LEDs

- Power/WPS

## Operating Temperature

- 32 to 104 °F (0 to 40 °C)

## Operating Humidity

- 0% to 90% non-condensing

## Certifications

- CE
- Wi-Fi Certified
- FCC
- IC

## Dimensions

- 2.68" x 1.65" x 2" (68 x 42 x 51 mm)

## Weight

- 0.25 lb (113.4 grams)

## Warranty

- 1-Year Limited Warranty

1 Maximum wireless signal rate derived from IEEE Standard 802.11g and 802.11n specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental factors will adversely affect wireless signal range.

2 Frequency Range varies depending on country's regulation

# Contacting Technical Support

U.S. and Canadian customers can contact D-Link technical support through our web site or by phone.

Before you contact technical support, please have the following ready:

- Model number of the product (e.g. DAP-1320)
- Hardware Revision (located on the label on the bottom of the router (e.g. rev A1))
- Serial Number (s/n number located on the label on the bottom of the router).

You can find software updates and user documentation on the D-Link website as well as frequently asked questions and answers to technical issues.

## For customers within the United States:

**Phone Support:**

(877) 453-5465

**Internet Support:**

<http://support.dlink.com>

## For customers within Canada:

**Phone Support:**

(800) 361-5265

**Internet Support:**

<http://support.dlink.ca>

# Warranty

Subject to the terms and conditions set forth herein, D-Link Systems, Inc. (“D-Link”) provides this Limited Warranty:

- Only to the person or entity that originally purchased the product from D-Link or its authorized reseller or distributor, and
- Only for products purchased and delivered within the fifty states of the United States, the District of Columbia, U.S. Possessions or Protectorates, U.S. Military Installations, or addresses with an APO or FPO.

## **Limited Warranty:**

D-Link warrants that the hardware portion of the D-Link product described below (“Hardware”) will be free from material defects in workmanship and materials under normal use from the date of original retail purchase of the product, for the period set forth below (“Warranty Period”), except as otherwise stated herein.

- Hardware (excluding power supplies and fans): One (1) year
- Power supplies and fans: One (1) year
- Spare parts and spare kits: Ninety (90) days

The customer’s sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link’s option, to repair or replace the defective Hardware during the Warranty Period at no charge to the original owner or to refund the actual purchase price paid. Any repair or replacement will be rendered by D-Link at an Authorized D-Link Service Office. The replacement hardware need not be new or have an identical make, model or part. D-Link may, at its option, replace the defective Hardware or any part thereof with any reconditioned product that D-Link reasonably determines is substantially equivalent (or superior) in all material respects to the defective Hardware. Repaired or replacement hardware will be warranted for the remainder of the original Warranty Period or ninety (90) days, whichever is longer, and is subject to the same limitations and exclusions. If a material defect is incapable of correction, or if D-Link determines that it is not practical to repair or replace the defective Hardware, the actual price paid by the original purchaser for the defective Hardware will be refunded by D-Link upon return to D-Link of the defective Hardware. All Hardware or part thereof that is replaced by D-Link, or for which the purchase price is refunded, shall become the property of D-Link upon replacement or refund.



### **Limited Software Warranty:**

D-Link warrants that the software portion of the product (“Software”) will substantially conform to D-Link’s then current functional specifications for the Software, as set forth in the applicable documentation, from the date of original retail purchase of the Software for a period of ninety (90) days (“Software Warranty Period”), provided that the Software is properly installed on approved hardware and operated as contemplated in its documentation. D-Link further warrants that, during the Software Warranty Period, the magnetic media on which D-Link delivers the Software will be free of physical defects. The customer’s sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link’s option, to replace the non-conforming Software (or defective media) with software that substantially conforms to D-Link’s functional specifications for the Software or to refund the portion of the actual purchase price paid that is attributable to the Software. Except as otherwise agreed by D-Link in writing, the replacement Software is provided only to the original licensee, and is subject to the terms and conditions of the license granted by D-Link for the Software. Replacement Software will be warranted for the remainder of the original Warranty Period and is subject to the same limitations and exclusions. If a material non-conformance is incapable of correction, or if D-Link determines in its sole discretion that it is not practical to replace the non-conforming Software, the price paid by the original licensee for the non-conforming Software will be refunded by D-Link; provided that the non-conforming Software (and all copies thereof) is first returned to D-Link. The license granted respecting any Software for which a refund is given automatically terminates.

### **Non-Applicability of Warranty:**

The Limited Warranty provided hereunder for Hardware and Software portions of D-Link’s products will not be applied to and does not cover any refurbished product and any product purchased through the inventory clearance or liquidation sale or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product and in that case, the product is being sold “As-Is” without any warranty whatsoever including, without limitation, the Limited Warranty as described herein, notwithstanding anything stated herein to the contrary.

### **Submitting A Claim (USA):**

The customer shall return the product to the original purchase point based on its return policy. In case the return policy period has expired and the product is within warranty, the customer shall submit a claim to D-Link as outlined below:

- The customer must submit with the product as part of the claim a written description of the Hardware defect or Software nonconformance in sufficient detail to allow DLink to confirm the same, along with proof of purchase of the product (such as a copy of the dated purchase invoice for the product) if the product is not registered.
- The customer must obtain a Case ID Number from D-Link Technical Support at 1-877-453-5465, who will attempt to assist the customer in resolving any suspected defects with the product. If the product is considered defective, the customer must obtain a Return Material Authorization (“RMA”) number by completing the RMA form and entering the assigned Case ID Number at <https://rma.dlink.com/>.

- After an RMA number is issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit, and the RMA number must be prominently marked on the outside of the package. Do not include any manuals or accessories in the shipping package. D-Link will only replace the defective portion of the product and will not ship back any accessories.
- The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery (“COD”) is allowed. Products sent COD will either be rejected by D-Link or become the property of D-Link. Products shall be fully insured by the customer and shipped to D-Link Systems, Inc., 17595 Mt. Herrmann, Fountain Valley, CA 92708. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via UPS Ground or any common carrier selected by D-Link. Return shipping charges shall be prepaid by D-Link if you use an address in the United States, otherwise we will ship the product to you freight collect. Expedited shipping is available upon request and provided shipping charges are prepaid by the customer. D-Link may reject or return any product that is not packaged and shipped in strict compliance with the foregoing requirements, or for which an RMA number is not visible from the outside of the package. The product owner agrees to pay D-Link’s reasonable handling and return shipping charges for any product that is not packaged and shipped in accordance with the foregoing requirements, or that is determined by D-Link not to be defective or non-conforming.

**Submitting A Claim (Canada):**

The customer shall return the product to the original purchase point based on its return policy. In case the return policy period has expired and the product is within warranty, the customer shall submit a claim to D-Link as outlined below:

- Customers need to provide their receipt (proof of purchase) even if the product is registered. Without a receipt, no warranty service will be done. The registration is not considered a proof of purchase.
- The customer must submit with the product as part of the claim a written description of the Hardware defect or Software nonconformance in sufficient detail to allow D-Link to confirm the same, along with proof of purchase of the product (such as a copy of the dated purchase invoice for the product) if the product is not registered.
- The customer must obtain a Case ID Number from D-Link Technical Support at 1-800-361-5265, who will attempt to assist the customer in resolving any suspected defects with the product. If the product is considered defective, the customer must obtain a Return Material Authorization (“RMA”) number by completing the RMA form and entering the assigned Case ID Number at <https://rma.dlink.ca/>.
- After an RMA number is issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit, and the RMA number must be prominently marked on the outside of the package. Do not include any manuals or accessories in the shipping package. D-Link will only replace the defective portion of the product and will not ship back any accessories.

- The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery (“COD”) is allowed. Products sent COD will be rejected by D-Link. Products shall be fully insured by the customer and shipped to D-Link Networks, Inc., 2525 Meadowvale Boulevard Mississauga, Ontario, L5N 5S2 Canada. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via Purolator Canada or any common carrier selected by D-Link. Return shipping charges shall be prepaid by D-Link if you use an address in Canada, otherwise we will ship the product to you freight collect. Expedited shipping is available upon request and provided shipping charges are prepaid by the customer. D-Link may reject or return any product that is not packaged and shipped in strict compliance with the foregoing requirements, or for which an RMA number is not visible from the outside of the package. The product owner agrees to pay D-Link’s reasonable handling and return shipping charges for any product that is not packaged and shipped in accordance with the foregoing requirements, or that is determined by D-Link not to be defective or non-conforming.
- RMA phone number: 1-800-361-5265 Hours of Operation: Monday-Friday, 9:00AM – 9:00PM EST

### **What Is Not Covered:**

The Limited Warranty provided herein by D-Link does not cover:

Products that, in D-Link’s judgment, have been subjected to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, repair or service in any way that is not contemplated in the documentation for the product, or if the model or serial number has been altered, tampered with, defaced or removed; Initial installation, installation and removal of the product for repair, and shipping costs; Operational adjustments covered in the operating manual for the product, and normal maintenance; Damage that occurs in shipment, due to act of God, failures due to power surge, and cosmetic damage; Any hardware, software, firmware or other products or services provided by anyone other than D-Link; and Products that have been purchased from inventory clearance or liquidation sales or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product.

While necessary maintenance or repairs on your Product can be performed by any company, we recommend that you use only an Authorized D-Link Service Office. Improper or incorrectly performed maintenance or repair voids this Limited Warranty.

### **Disclaimer of Other Warranties:**

EXCEPT FOR THE LIMITED WARRANTY SPECIFIED HEREIN, THE PRODUCT IS PROVIDED “AS-IS” WITHOUT ANY WARRANTY OF ANY KIND WHATSOEVER INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.

IF ANY IMPLIED WARRANTY CANNOT BE DISCLAIMED IN ANY TERRITORY WHERE A PRODUCT IS SOLD, THE DURATION OF SUCH IMPLIED WARRANTY SHALL BE LIMITED TO THE DURATION OF THE APPLICABLE WARRANTY PERIOD SET FORTH ABOVE. EXCEPT AS EXPRESSLY COVERED UNDER THE LIMITED WARRANTY PROVIDED HEREIN, THE ENTIRE RISK AS TO THE QUALITY, SELECTION AND PERFORMANCE OF THE PRODUCT IS WITH THE PURCHASER OF THE PRODUCT.

**Limitation of Liability:**

TO THE MAXIMUM EXTENT PERMITTED BY LAW, D-LINK IS NOT LIABLE UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER LEGAL OR EQUITABLE THEORY FOR ANY LOSS OF USE OF THE PRODUCT, INCONVENIENCE OR DAMAGES OF ANY CHARACTER, WHETHER DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL (INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF GOODWILL, LOSS OF REVENUE OR PROFIT, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, FAILURE OF OTHER EQUIPMENT OR COMPUTER PROGRAMS TO WHICH D-LINK'S PRODUCT IS CONNECTED WITH, LOSS OF INFORMATION OR DATA CONTAINED IN, STORED ON, OR INTEGRATED WITH ANY PRODUCT RETURNED TO D-LINK FOR WARRANTY SERVICE) RESULTING FROM THE USE OF THE PRODUCT, RELATING TO WARRANTY SERVICE, OR ARISING OUT OF ANY BREACH OF THIS LIMITED WARRANTY, EVEN IF D-LINK HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE SOLE REMEDY FOR A BREACH OF THE FOREGOING LIMITED WARRANTY IS REPAIR, REPLACEMENT OR REFUND OF THE DEFECTIVE OR NONCONFORMING PRODUCT. THE MAXIMUM LIABILITY OF D-LINK UNDER THIS WARRANTY IS LIMITED TO THE PURCHASE PRICE OF THE PRODUCT COVERED BY THE WARRANTY. THE FOREGOING EXPRESS WRITTEN WARRANTIES AND REMEDIES ARE EXCLUSIVE AND ARE IN LIEU OF ANY OTHER WARRANTIES OR REMEDIES, EXPRESS, IMPLIED OR STATUTORY.

**Governing Law:**

This Limited Warranty shall be governed by the laws of the State of California. Some states do not allow exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the foregoing limitations and exclusions may not apply. This Limited Warranty provides specific legal rights and you may also have other rights which vary from state to state.

**Trademarks:**

D-Link is a registered trademark of D-Link Corporation/D-Link Systems, Inc. Other trademarks or registered trademarks are the property of their respective owners.

**Copyright Statement:**

No part of this publication or documentation accompanying this product may be reproduced in any form or by any means or used to make any derivative such as translation, transformation, or adaptation without permission from D-Link Corporation/D-Link Systems, Inc., as stipulated by the United States Copyright Act of 1976 and any amendments thereto. Contents are subject to change without prior notice.

Copyright ©2012 by D-Link Corporation/D-Link Systems, Inc. All rights reserved.

**CE Mark Warning:**

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

### **FCC Statement:**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### **FCC Caution:**

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

### **IMPORTANT NOTICE:**

#### **FCC Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

#### **Industry.Canada.Statement**

This device complies with RSS-210 of the Industry Canada Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Ce dispositif est conforme à la norme CNR-210 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes:

- (1) le dispositif ne doit pas produire de brouillage préjudiciable, et
- (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

**Radiation Exposure Statement:**

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Declaration d'exposition aux radiations: Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

# Registration

Register your product online at [registration.dlink.com](http://registration.dlink.com)



Product registration is entirely voluntary and failure to complete or return this form will not diminish your warranty rights.

Version 1.0  
August 23, 2012